

**INFORMATION DISCLOSURE CITATION**  
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ATTY DOCKET NO.  
080/02295

SERIAL NO.  
US Continuation of 09/537,004

APPLICANT(S)  
Andrew L. PEARLMAN

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GROUP  
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**U.S. PATENT DOCUMENTS**

| *EXAMINER<br>INITIAL |    | DOCUMENT NUMBER | DATE       | NAME                  | CLASS | SUBCLASS | FILING DATE<br>IF APPROPRIATE |
|----------------------|----|-----------------|------------|-----------------------|-------|----------|-------------------------------|
| M                    | 1  | 4,510,939       | 16 Apr '85 | BRENMAN, H. S. et al. |       |          |                               |
|                      | 2  | 5,070,862       | 10 Dec '91 | BERLANT, S. R.        |       |          |                               |
|                      | 3  | 4,820,973       | Apr '98    | ALVAREZ               |       |          |                               |
|                      | 4  | 6,122,544       | Oct '00    | ORGAN                 |       |          |                               |
|                      | 5  | 4,763,660       | 16 Aug '88 | KROLL et al.          |       |          |                               |
|                      | 6  | 5,295,483       | 22 Mar '94 | NOWACKI et al.        |       |          |                               |
|                      | 7  | 4,896,673       | 30 Jan '90 | ROSE et al.           |       |          |                               |
|                      | 8  | 5,099,846       | 31 Mar '92 | HARDY                 |       |          |                               |
|                      | 9  | 4,082,087       | 4 Apr '78  | HOWSON                |       |          |                               |
|                      | 10 | 4,763,660       | 16 Aug '88 | KROLL et al.          |       |          |                               |
| M                    | 11 | 5,045,249       | 3 Sep '91  | JIN et al.            |       |          |                               |

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|---|----|-----------------|------------|---------|-------|----------|-------------|----|
|   |    |                 |            |         |       |          | YES         | NO |
| M | 12 | DE 42 25 112    | 9 Dec '93  | GERMANY |       |          |             |    |
|   | 13 | EP 0 050 353    | 19 Oct '81 | EUROPE  |       |          |             |    |
|   | 14 | GB 2 138 148    | 17 Oct '84 | ENGLAND |       |          |             |    |
|   | 15 | FR 2 655 835    | 21 Jun '91 | FRANCE  |       |          |             |    |
| M | 16 | GB 2 276 326    | 28 Sep '94 | ENGLAND |       |          |             |    |

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| M | 17 | MASUDA et al.; "Topographical Map of Innervation Zones within Single Motor Units Measured with a Grid Surface Electrode"; August 1988; pp. 623-628; IEEE Transactions on Biomedical Engineering; Vol. 35; No. 8; XP000005699; New York, US |
| M | 18 | MONSTER et al.; "A System for the Rapid Acquisition of Surface Potential Maps of Human Skeletal Muscle Motor Units"; February 2, 1980; pp. 110-112; IEEE Transactions on Biomedical Engineering; Vol. 27; No. 2; XP002114215; New York, US |

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*G. Mammel*

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*7/2/03*

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| m                    | 19 | 4,387,721       | 14 Jun '83 | ENJOJI             |       |          |                               |
|                      | 20 | 5,247,938       | 28 Sep '93 | SILVERSTEIN et al. |       |          |                               |
|                      | 21 | 4,537,203       | 27 Aug '85 | MACHIDA            |       |          |                               |
|                      | 22 | 4,805,621       | 21 Feb '89 | HEINZE et al.      |       |          |                               |
|                      | 23 | 4,823,797       | 25 Apr '89 | HEINZE et al.      |       |          |                               |
|                      | 24 | 5,282,840       | 1 Feb '94  | HUDRLIK            |       |          |                               |
|                      | 25 | 5,353,802       | 11 Oct '94 | OLLMAR             |       |          |                               |
|                      | 26 | 5,454,377       | 3 Oct '95  | DZWONCZYK et al.   |       |          |                               |
|                      | 27 | 5,063,937       | 12 Nov '91 | EZENWA et al.      |       |          |                               |
|                      | 28 | 4,291,708       | 29 Sep '81 | FREI et al.        |       |          |                               |
| m                    | 29 | 4,458,694       | 10 Jul '84 | SOLLISH et al.     |       |          |                               |

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|   |    |                 |            |         |       |          | YES         | NO |
| m | 30 | WO 94/20012     | 15 Sep '94 | PCT     |       |          |             |    |
|   | 31 | EP 0 000 759    | 21 Feb '79 | EUROPE  |       |          |             |    |
|   | 32 | WO 91/13584     | 19 Sep '91 | PCT     |       |          |             |    |
|   | 33 | EP 0 190 043    | 6 Aug '86  | EUROPE  |       |          |             |    |
| m | 34 | WO 96/12439     | 2 May '96  | PCT     |       |          |             |    |

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| m | 36 | CESPEDES et al.; "Elastography: Elastic Imaging Using Ultrasound with Application to Muscle and Breast In Vivo;" April 1993; pp. 73-88; Ultrasonic Imaging; Vol. 15; No. 2; XP000383142; Orlando, US   |

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| M                    | 37 | 4,539,640       | 3 Sep '85  | FRY et al.           |       |          |                               |
|                      | 38 | 4,617,939       | 21 Oct '86 | BROWN et al.         |       |          |                               |
|                      | 39 | 4,819,658       | 11 Apr '89 | KOLODNER             |       |          |                               |
|                      | 40 | 5,143,079       | 1 Sep '92  | FREI et al.          |       |          |                               |
|                      | 41 | 5,178,147       | 12 Jan '93 | OPHIR et al.         |       |          |                               |
|                      | 42 | 4,493,039       | 8 Jan '85  | GREGORY, W. D.       |       |          |                               |
| M                    | 43 | 5,272,624       | 21 Dec '93 | GISSER, D. G. et al. |       |          |                               |
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|---|----|-----------------|------------|---------|-------|----------|-------------|----|
|   |    |                 |            |         |       |          | YES         | NO |
| M | 44 | GB 2 273 987    | 6 Jul '94  | ENGLAND |       |          |             |    |
| M | 45 | WO 93/23112     | 25 Nov '93 | PCT     |       |          |             |    |
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| M | 47 | RECORD et al.; "Multifrequency Electrical Impedance Tomography;" July 1992; pp. 47-50; Clinical Physics and Physiological Measurement, Supplement A; Vol. 13; XP000431598; York, GB |

EXAMINER *G. Manner*

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| 48 | Zhili Huang, et al.; "Bioimpedance Measurement: Theory, Experiment and Application;" November 1987; pp. 1416-1427 Proceedings of the Ninth Annual Conference of the IEEE Engineering in Medicine and Biology Society; Vol. 3; XP000015434                             |
| 49 | PIPERNO, G. et al.; "Breast Cancer Screening by Impedance Measurements;" 1990; pp. 111-117; Frontiers Med. Biol.; Vol. 2; plus two attached pages "Mammoscan: A Promising New Technology for Breast Screening and Diagnosis;" and "Mammoscan Breast Impedance System" |
| 50 | ESSELLE, et al.; "Capacitive Sensors for In-Vivo Measurements of the Dielectric Properties of Biological Materials;" March 1988; pp. 101-105; IEEE Transactions on Instrumentation & Measurement; Vol. 37; No. 1  |
| 51 | GERSING, E.; "Messung der Elektrischen Impedance von Organen-Apparative Ausrustung fur Forschung und Klinische Anwendung;" 1991; pp. 6-11; Biomed. Technik 36; (including abstract in English)  |
| 52 | VRANA, J. et al.; "Mesure de L'Impedance des Tissus Hepatiques Transforms pas des Processus Lesionels;" 1992; pp. 165-168; Ann. Gastroentreaol. Hepetol.; Vol. 28; No. 4; (including abstract in English)   |
| 53 | RAJSHEKHAR, V.; "Continuous Impedance Monitoring During CT-Guided Stereotactic Surgery: Relative Value in Cystic and Solid Lesions; 1992; pp. 439-444" British Journal of Neurosurgery (1992); Vol. 6   |
| 54 | MASTROTOTARO, J. J. et al.; "Rigid and Flexible Thin-Film Multi-Electrode Arrays for Transmural Cardiac Recording;" March 1992; pp. 271-279; IEEE Trans. Biomed. Engr.; Vol. 39; No. 3  |
| 55 | BUCKLES, D. S. et al.; "Image-Base Display of Activation Patterns Derived from Scattered Electrodes;" IEEE Trans. Biomed. Engr.; Vol. 42; No. 1; January 1995; pp. 111-115  |
| 56 | URBAN, G. A. et al.; "Development of a Multiple Thin-Film Semimicro DC-Probe for Intracerebral Recordings;" October 1990; pp. 913-917 IEEE Trans. Biomed. Eng.; Vol. 37; No. 10   |
| 57 | SMITH, R. W. M. et al.; "A Real-Time Electrical Impedance Tomography System for Clinical Use-Design and Preliminary Results;" February 1995; pp. 133-139; IEEE Trans. Biomed. Eng.; Vol. 42   |
| 58 | SUROWIEC, A. J. et al.; "Dielectric Properties of Breast Carcinoma and the Surrounding Tissues;" April 1988; pp. 257-263; IEEE Trans. Biomed. Eng.; Vol. 35; No. 4  |
| 59 | HEIMBACH, M.; "Measures of Preformance;" 1990; pp. 158-174; Electrical Impedance Tomography; (12.1)   |

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KORTE, C. J.; "Subsurface Electrical Impedance Imaging Using Orthogonal Linear Electrode arrays;" January 16, 1996; pp. 41-46; IEEE Proceedings: Science, Measurement and Technology; Vol. 143; No. 1; XP006006750

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G. Manuel

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Form PTO-1449

## INFORMATION DISCLOSURE STATEMENT

Atty. Docket:  
701030-11

Serial No.:

09/537,004

09/995,217

Applicant: Andrew L. Pearlman

Filing Date: March 28, 2000

Group: 3737

## U.S. PATENT DOCUMENTS

| Examiner Initial |    | Document Number | Date          | Name          | Class | Sub-Class | Filing Date |
|------------------|----|-----------------|---------------|---------------|-------|-----------|-------------|
| M                | A1 | 4,493,039       | Jan. 8, 1985  | Gregory       | —     | —         |             |
| M                | B1 | 5,272,624       | Dec. 21, 1993 | Gisser et al. | —     | —         |             |
|                  | C1 |                 |               |               |       |           |             |
|                  | D1 |                 |               |               |       |           |             |
|                  | E1 |                 |               |               |       |           |             |
|                  | F1 |                 |               |               |       |           |             |
|                  | G1 |                 |               |               |       |           |             |
|                  | H1 |                 |               |               |       |           |             |
|                  | I1 |                 |               |               |       |           |             |
|                  | J1 |                 |               |               |       |           |             |

## FOREIGN PATENT DOCUMENTS

| Examiner Initial |    | Document Number | Date          | Country        | Class | Sub-Class | Translation   |
|------------------|----|-----------------|---------------|----------------|-------|-----------|---|
| M                | K1 | 2 273 987       | July 6, 1994  | United Kingdom | —     | —         | <input type="checkbox"/> Yes<br><input type="checkbox"/> No |
| M                | L1 | WO 93/23112     | Nov. 25, 1993 | International  | —     | —         | <input type="checkbox"/> Yes<br><input type="checkbox"/> No |

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| M | M1 | Rigaud, B. et al; "Experimental Acquisition System for Impedance Tomography with Active Electrode Approach"<br>November 1, 1993; pp 593-599, Medical and Biological Engineering and Computing; Vol. 31; No. 6:<br>XP0000415771   |
| M | N1 | Korte, C.J.; "Subsurface Electrical Impedance Imaging Using Orthogonal Linear Electrode arrays", Jan. 16, 1996; pp. 41-46, IEEE Proceedings: Science, Measurement and Technology; Vol. 143, No. 1, XP006006750   |
| M | O1 | Anah, J. et al; "Multi-Function Interface Unit for Applied Potential Tomography"; Nov. 1998; pp. 287-288; Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society (IEEE Cat. No. 88CH2566-8); XP002171794                                     |
| M | P1 | Riu et al., "In Viv Static Imaging for the Reactive Parts in Electrical Impedance Tomography Using Multifrequency Techniques;" October 1992; pp-1706-1707; Proceedings of the Annual International Conference of the Engineering in Medicine and Biology Society; Vol. 5; No. 14; XP000514393;US |

Examiner:

G. Manuel

Date Considered:

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